

REMARKS

The Examiner's comments together with the cited references have been carefully studied. Claims 1-19 stand rejected. Claims 1 and 2 have been amended. Claim 4 has been cancelled. Claims 1-3 and 5-19 are presently pending. Favorable reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

The basis for the amendment to claim 1 providing a concentration from 1.5×10^{-2} to 0.3 mol/l can be found on page 6, line 27 of the specification and claim 4 as originally filed. The basis for amendment to claim 1 providing a temperature from 15°C to 35°C can be found on page 6, line 15 of the specification.

Rejection under 35 U.S.C. § 112, First Paragraph:

The Examiner has rejected claims 1-19 under 35 U.S.C. 112, first paragraph, indicating that the specification does not reasonably enable aluminum concentrations less than 1.5×10^{-2} mol/l. Applicants have amended the claim to recite an aluminum concentration from 1.5×10^{-2} to 0.3 mol/l, which as indicated by the Examiner, is enabled by the specification. This amendment is deemed to obviate this rejection and therefore it is requested that this rejection be withdrawn.

Rejection under 35 U.S.C. § 112, Second Paragraph:

The Examiner has rejected claims 1-19 under 35 U.S.C. 112, second paragraph, indicating that the term "obtainable" renders the claim indefinite. Applicant has amended claim 1 to recite a polymer "obtained by" the claimed preparation process. The Examiner has further indicated that the term "ambient" is not defined. Application has amended the claims to define a suitable temperature range. The Examiner also indicates that claim 2 is unclear. Applicants have amended this claim to remove the indefiniteness or ambiguity. Therefore, it is respectfully requested that this rejection be withdrawn.

Rejection under 35 U.S.C. § 102(e), Second Paragraph:

The Examiner has rejected claims 1-19 relying on 35 U.S.C. 102(e), as being anticipated by Liu et al. (6,548,149). Applicants respectfully submit that Liu et

al. does not disclose, teach, or suggest an aluminosilicate polymer obtained by the preparation method claimed. Therefore, it is respectfully requested that this rejection be reconsidered and withdrawn.

According to the Examiner:

Liu teaches an ink jet recording element that contains a support and at least one ink-receiving layer ... a hydrosoluble binder ... and an aluminosilicate polymer that is dispersed in the binder matrix ... Claims 1-16 are viewed as product-by-process claims and hence the methods that the aluminosilicate is created by are not pertinent, unless applicant can show a different product is produced, despite that fact that Liu recites that the inclusion of the aluminosilicate in the ink-receiving layer results in an ink jet recording material that has a high gloss, produces high quality printed images and has a good dye keeping time.

Claim 1 of the instant invention requires treating a mixture of aluminum and silicon alkoxide with aqueous alkali in the presence of silanol groups with an aqueous alkali, the aluminum concentration, Al/Si molar ratio and alkali/Al molar ratio being maintained at specified concentrations; stirring the mixture at a temperature between 15°C and 35°C long enough to form an aluminosilicate polymer; and eliminating the by-products.

Liu et al. fails to disclose all of the claimed limitations. First, Liu et al. fails to disclose utilizing an alkali and silanol as a reaction solvent as claimed. Instead, Liu et al. discloses an acid catalyst and water. Therefore, Liu et al. cannot maintain an alkali/Al molar ratio of between 2.3 and 3 as presently claimed.

Second, Liu et al. fails to disclose stirring the mixture at a temperature of from 15°C to 35°C in the presence of silanol groups long enough to form an aluminosilicate polymer. As indicated in col. 23, lines 1-12 of Liu et al., the mixture is heated to a temperature of 60°C for 24 hours. This is well above the range recited by the instant claims.

Regarding the indication that claims 1-16 are viewed as product-by-process claims, the aluminosilicate material obtained by Liu et al. is obtained by a different process than that of the claimed invention. In the field of aluminosilicate chemistry, those skilled in the art understand that the nature of the product is extremely dependent upon the method of production. A product made by a distinct

process would have a different structure, and therefore, the different properties. Therefore, one skilled in the art would not expect to obtain a material yielding the same properties when the material is obtained from a distinct process utilizing the method disclosed by Liu et al.

For example, a synthesis carried out in water, such as in Comparative Example 1, yields type I allophane with a hollow spherical shape with the silanol sheet inside and the aluminol sheet outside. However, a synthesis carried out in an organic solvent leads to a type II allophane having a hollow spherical shape with the silanol sheet outside and the aluminol sheet inside. See Hollow Nanospheres, Allophanes, "All-organic synthesis and characterization," Linder et al., Microporous Mesoporous materials (1998) 21(4-6), 381-386.

In Comparative Example 5 of the specification, the aluminosilicate is prepared in the absence of alkali, and is heated to 80°C, which is above the claimed temperature range. By contrast, Inventive Example 7 is prepared having an alkali/Al ratio of 2.31 and is prepared within the claimed 15°C to 35°C temperature range. As demonstrated by comparing Fig 5 (correlating to Comparative Example 5) with Fig. 7 (correlating to Inventive Example 7), the dye keeping of the product obtained by having an alkali/Al ratio of 2.31 is superior. Furthermore, as indicated by Table II, the gloss of Inventive Example 7 is much higher than that of comparative Example 5). These two observations show that the products obtained by the two distinct processes are not the same. As the two products demonstrate distinct properties, it is respectfully urged that the product disclosed by Liu et al., which is obtained by a distinct process, is different from the product obtained by the presently claimed invention. Therefore, Liu et al. does not provide a proper basis for rejection of the instant claims.

Claims 2, 3 and 5-19 benefit from dependency on claim 1, which as discussed above, is patentable. Applicants therefore respectfully request that the Examiner reconsider the rejection under 35 U.S.C. 102(e) and allow the claims.

Double Patenting:

Applicants note that claims 1-19 are provisionally rejected over copending Application Nos. 2006/0045833, 2007/0104900, 2005/0253916 and

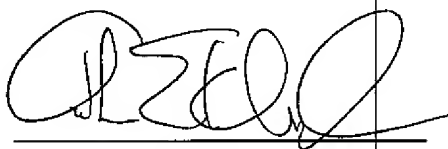
2005/0238559. As these are all provisional rejections, Applicants hereby file a terminal disclaimer to overcome these rejections upon the indication of allowable claims.

Applicants have reviewed the prior art made of record and believe that singly or in any suitable combination, they do not render Applicants' claimed invention unpatentable.

In view of the foregoing remarks and amendment, the claims 1-3 and 5-19 are now deemed allowable and such favorable action is courteously solicited.

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.